RENEWABLE NATURAL RESOURCES • RNR

General education courses are marked with stars (★).

★ 1001 Natural Resource Conservation (3) F★ S★, Prereq.: RNR 1001 or consent of instructor. Students are responsible for paying for travel expenses associated with this course. General education courses are marked with stars (★).

★ 2031 Field Studies in Wildlife Habitat (2) S★, F. 2 hrs. lab. Students are responsible for paying for travel expenses associated with this course. Students are responsible for paying for travel expenses associated with this course. General education courses are marked with stars (★).

★ 2039 Introduction to Renewable Natural Resources Policy (3) F★ S★, Prereq.: RNR 1001 or consent of instructor. Students are responsible for paying for travel expenses associated with this course. General education courses are marked with stars (★).

★ 2036 Field Studies in Mensuration (2) S★, F. 2 hrs. lecture; 3 hrs. lab. Students are responsible for paying for travel expenses associated with this course. General education courses are marked with stars (★).

★ 2033 Field Studies in Wildlife Utility (1) F★ S★, Prereq.: RNR 2002 and 3103. One week field course. Students are responsible for paying for travel expenses associated with this course. General education courses are marked with stars (★).

★ 2035 Field Studies in Silviculture I (1) F★, Prereq.: RNR 2001, 3002, and 3103. One week field course. Students are responsible for paying for travel expenses associated with this course. General education courses are marked with stars (★).

★ 2032 Field Studies in Mensuration (2) F★ S★, Prereq.: RNR 2001 or consent of instructor. Students are responsible for paying for travel expenses associated with this course. General education courses are marked with stars (★).

★ 2034 Field Studies in Wildlife Ecological Systems (2) F★ S★, Prereq.: RNR 2001 or consent of instructor. Students are responsible for paying for travel expenses associated with this course. General education courses are marked with stars (★).
2030 or AGEC 2003 or equivalent.

4038 Forest Resource Economics (3) F

students are responsible for paying for travel expenses associated with this course. Wildlife science and the scientific method; generating and testing hypotheses and predictions, statistical analysis of class generated data and scientific writing. Population inventories and analysis; harvest management; methods to capture animals and determine age and sex. Immobilization methods, marking methods, radio telemetry, and assessment of nutrition and condition. Use of GPS and GIS in wildlife ecology.

4034 Independent Natural Resources Management (3) S

AGEC 2003 or equivalent.

4035 Ecology and Management of Wetland Wildlife (4) F

4033 Silviculture and Management of Hardwoods (4) S

4030 Tropical Forest Geomorphology, physiochemistry, biology, and ecology of inland waters.

4020 Taxonomy and Ecology of Wetland Plants (4) See BIOL 4020.

4021 Recreation in the Forest Environment (3) F

4022 Principles of Aquaculture (4) S

Prerequisites: ECON 2030 or and either CHEM 2060 or 2262. 3 hrs. lecture; 3 hrs. lab. Mathematical techniques; managing wild fisheries stocks. Principles related to the context, planning, design, and implementation of habitat restoration and evaluation; generation of habitat restoration efforts using the case study approach. Ranges, landscapes, nearby urban areas; international trade of forest products; demand for non-timber resources.

4039 Renewable Natural Resources Policy (3) S

4040 Fishery Economics and Management (3) F

4041 Integrated Natural Resources Management and Policy (3) S

4051 Wildlife Habitat Management (3) S

4001 Problem Solving in Natural Resource Management (1-4) F,S,Su

ENERGY USE AND CONSERVATION

4002 Fisheries Literature and Communication (3) F 2 hrs. lecture; 3 hrs. lab. Organization and communication of technical fisheries articles and reports.

4101 Wildlife Management Techniques (4) F Prereq.: RNR 2031 and EXST 2201, 3 hrs. lecture; 3 hrs. lab. Weekend field trips. Students are responsible for paying for travel expenses associated with this course. Wildlife science and the scientific method; generating and testing hypotheses and predictions, statistical analysis of class generated data and scientific writing. Population inventories and analysis; harvest management; methods to capture animals and determine age and sex. Immobilization methods, marking methods, radio telemetry, and assessment of nutrition and condition. Use of GPS and GIS in wildlife ecology.

4102 Quantitative Silviculture (3) F

4047 Seasoning and Preservation (4) V Prereq.: RNR 2043 or equivalent. 5 hrs. lecture; 3 hrs. lab. Principles of lumber drying and wood preservation; economics of the treating industry.

4050 Industrial Forestry Operations (2) S

4039 Wildlife Habitat Management (3) S

4048 Forest Wildlife Ecology (4) F Prereq.: RNR 2031, 2031, 2 hrs. lecture; 3 hrs. lab. One weekend field trip. Students are responsible for paying for travel expenses associated with this course. Wildlife science and the scientific method; generating and testing hypotheses and predictions, statistical analysis of class generated data and scientific writing. Population inventories and analysis; harvest management; methods to capture animals and determine age and sex. Immobilization methods, marking methods, radio telemetry, and assessment of nutrition and condition. Use of GPS and GIS in wildlife ecology.

4049 Mechanical and Physical Properties of Wood (3) V Prereq.: RNR 2043 or equivalent. 2 hrs. lecture; 3 hrs. lab. Standard laboratory testing procedures, basic strength determination, working stresses, and timber design.

4045 Design and Control of Wood-Using Processes (3) V Prereq.: RNR 2043. Relationship of basic physical properties of wood to utilization processes involving machining, gluing, and finishing.

4046 Chemical Properties of Wood (4) V Prereq.: RNR 2047: and either CHEM 2060 or 2262. 3 hrs. lecture; 3 hrs. lab. Chemistry of wood, cellulose, lignin, and extraneous materials in wood and bark; chemical utilization and modification of wood.

4047 Social, Economic, and Environmental Impacts of Wood (3) S Prereq.: AGEC 2003 or equivalent. 3 hrs. lecture; 3 hrs. lab. Students are responsible for paying for travel expenses associated with this course. Wildlife science and the scientific method; generating and testing hypotheses and predictions, statistical analysis of class generated data and scientific writing. Population inventories and analysis; harvest management; methods to capture animals and determine age and sex. Immobilization methods, marking methods, radio telemetry, and assessment of nutrition and condition. Use of GPS and GIS in wildlife ecology.

4002 Fisheries Literature and Communication (3) F 2 hrs. lecture; 3 hrs. lab. Organization and communication of technical fisheries articles and reports.

4101 Wildlife Management Techniques (4) F Prereq.: RNR 2031 and EXST 2201, 3 hrs. lecture; 3 hrs. lab. Weekend field trips. Students are responsible for paying for travel expenses associated with this course. Wildlife science and the scientific method; generating and testing hypotheses and predictions, statistical analysis of class generated data and scientific writing. Population inventories and analysis; harvest management; methods to capture animals and determine age and sex. Immobilization methods, marking methods, radio telemetry, and assessment of nutrition and condition. Use of GPS and GIS in wildlife ecology.

4102 Quantitative Silviculture (3) F

4104 Forest Tree Improvement (3) F Prereq.: RNR 3002 or permission of instructor. Genetic basis of variation in natural populations of forest trees; principles for using this variation to obtain genetically improved trees for reforestation; techniques of genetic testing, selection, breeding, and genetic engineering; methods for in situ and ex situ conservation of genetic resources.

4101 Integrated Natural Resources Management and Policy (3) S Prereq.: RNR 2039, 3004 and senior status in the College of Natural Resources; 4 hrs. lecture; 4 hrs. lab. Students are responsible for paying for travel expenses associated with this course. Rates of population growth and distribution; animal and vegetative reproduction of forest trees and other woody plants; effects of various forest site factors on physiological processes affecting survival, growth, and yield of trees; interpretation of response of trees to environmental stresses.

4017 Physical Ecology (3) F

4030 Tropical Forest: (1) F Prereq.: BIOL 2101, 1208 and CHEM 1201, 1202, 1212 or equivalent. Geomorphology, physiochemistry, biology, and ecology of inland waters.

4033 Silviculture and Management of Hardwoods (4) S Prereq.: RNR 3002 or consent of instructor. 3 hrs. lecture; 3 hrs. lab. Students are responsible for paying for travel expenses associated with this course. Extended field trips, one weekend field trip. Ecology, silviculture, and management of hardwood forest ecosystems; improvement, conservation, and use for forest products, wildlife habitats, and other amenities.

4035 Ecology and Management of Upland Wildlife (3) F 2 hrs. lecture; 3 hrs. lab; extended field trips. Students are responsible for paying for travel expenses associated with this course. Management of wildlife in and around managed forests, wildland and wildlife; recreational leasing of forest land; current issues related to upland wildlife.

4036 Forest Wildlife Ecology (4) F Prereq.: ECON 2030 or AGEC 2003 or equivalent. RNR 3036, 3037, and 3040. 3 hrs. lecture; 3 hrs. lab. Compounding and discounting; management of even-aged and uneven-aged management, decision criteria, and decision variables; management of an existing stand; forest taxation and valuation; management of wildlife in and around managed forests; wildland and wildlife; recreational leasing of forest land; current issues related to upland wildlife.

4037 Biology of Fishes (3) S Prereq.: RNR 4145 or consent of instructor. Morphological, physiological, and behavioral adaptations of aquatic organisms; relationships between fish biology and fisheries management.

4038 Forest Resource Economics (3) F Prereq.: ECON 2001 or AGEC 2003. Economic theory applied to forest resources and their utilization; structure of the forest markets, demand of forest products, timber supply and stumpage price; resource conservation and endangered species; international trade of forest products; demand for non-timber resources.

4039 Renewable Natural Resources Policy (3) S History of forestry and forest legislation; development and evaluation of policies in forestry, wildlife, and fisheries; current issues. 3 hrs. lecture; 3 hrs. lab. Students are responsible for paying for travel expenses associated with this course. Wildlife science and the scientific method; generating and testing hypotheses and predictions, statistical analysis of class generated data and scientific writing. Population inventories and analysis; harvest management; methods to capture animals and determine age and sex. Immobilization methods, marking methods, radio telemetry, and assessment of nutrition and condition. Use of GPS and GIS in wildlife ecology.

4002 Fisheries Literature and Communication (3) F 2 hrs. lecture; 3 hrs. lab. Organization and communication of technical fisheries articles and reports.

4101 Wildlife Management Techniques (4) F Prereq.: RNR 2031 and EXST 2201, 3 hrs. lecture; 2 hrs. lab. Students are responsible for paying for travel expenses associated with this course. Wildlife science and the scientific method; generating and testing hypotheses and predictions, statistical analysis of class generated data and scientific writing. Population inventories and analysis; harvest management; methods to capture animals and determine age and sex. Immobilization methods, marking methods, radio telemetry, and assessment of nutrition and condition. Use of GPS and GIS in wildlife ecology.

4104 Forest Products Manufacturing (4) F Prereq.: RNR 2043; 3 hrs. lecture; 3 hrs. lab. Principles and techniques in the manufacture of forest products including lumber, treated materials, furniture, adhesive, and composite materials such as particle board, fiber density board, oriented strandboard, and engineered lumber.

4105 Aquaculture Production Systems (3) S Prereq.: BIOL 2001 and cultural practices in aquaculture. Techniques of the major global finfish, crustacean, mollusk, amphibian, and reptilian species. 4106 Techniques in Limnology and Fisheries (2) S Prereq.: junior, senior, or graduate standing and permission of instructor. 1 hr. lecture; 1 hr. lab. Students are responsible for paying for travel expenses associated with this course. Wildlife science and the scientific method; generating and testing hypotheses and predictions, statistical analysis of class generated data and scientific writing. Population inventories and analysis; harvest management; methods to capture animals and determine age and sex. Immobilization methods, marking methods, radio telemetry, and assessment of nutrition and condition. Use of GPS and GIS in wildlife ecology.

4107 Human Impacts in Natural Resources (3) F Prereq.: RNR 2039, 6 hrs. social science general education electives. Human behavior as related to management and use of natural resources.

4115 Hydrology of Natural Landscapes (3) Prereq.: AGRO 2051 and MATH 1431 or consent of instructor. 2 hrs. lecture; 3 hrs. lab. Hydrological principles of natural landscapes; understanding of characteristics and role of water in environment; concepts for water resources such as water budget, watersheds, and reservoirs.

4000 Topics in Marine Zoology (2-6) See BIOL 4600.

4900 Watershed Hydrology (3) See ENV 4900.

7012 Ecology and Management of Upland Birds (3) F 2 hrs. lecture; 3 hrs. lab. Students are responsible for paying for travel expenses associated with this course. Wildlife science and the scientific method; generating and testing hypotheses and predictions, statistical analysis of class generated data and scientific writing. Population inventories and analysis; harvest management; methods to capture animals and determine age and sex. Immobilization methods, marking methods, radio telemetry, and assessment of nutrition and condition. Use of GPS and GIS in wildlife ecology.